

Additional National Digital Forecast Database (NDFD) Data via Amazon Web Services NWS Product Description Document (PDD) April 2022

Part 1 - Mission Connection

a. Product Description – The [NDFD](#) contains a seamless mosaic of digital weather forecasts from National Weather Service (NWS) field offices and the National Centers for Environmental Prediction (NCEP).

b. Purpose – The NDFD is the primary means by which the NWS provides digital information to customers and partners. Operational and experimental NDFD grid files are available for download via NWS Telecommunications Gateway File Transfer Protocol (TGFTP) servers. NDFD web services (graphics and eXtensible Markup Language (XML)) are available via the NWS Internet Dissemination System (NIDS). This additional outlet via Amazon Web Services (AWS) will provide public cloud access to specific NDFD products and services at full spatial and temporal resolution for at least the next year. These include graphics and point data in XML for new and experimental elements that due to system limitations are not available via NIDS. AWS access will be provided until these data are available via NIDS and/or until this prototype concludes. New content for the comment period extension (April 28, 2022 - April 28, 2023) includes adding all elements to the XML feed and providing a new webpage for low-bandwidth users.

c. Audience – The intended audience includes requesting NWS partners and other users of NDFD products.

d. Presentation Format – NDFD is available as grid files in Gridded Binary Data Edition 2 (GRIB2), XML, and as graphics via a web browser.

1. An archive of grid files in GRIB2 format on AWS at registry.opendata.aws/noaa-ndfd/. These are the same operational and experimental NDFD grid files available via the NWS TGFTP servers.
2. XML: Users can request NDFD data for points using the Internet via NDFD XML Simple Object Access Protocol (SOAP) or Representational State Transfer (REST). The response to the user request is returned in XML format. The additional service on AWS at digital.mdl.nws.noaa.gov/xml **will provide elements NOT available** via operational NDFD XML services on NIDS at graphical.weather.gov/xml and **those that are already available**.
3. Online NDFD graphics at digital.mdl.nws.noaa.gov and graphical.mdl.nws.noaa.gov (for low-bandwidth). The additional viewers on

AWS provides graphics for NDFD elements currently available on NIDS at digital.weather.gov and graphical.weather.gov as well as graphics for new and experimental NDFD elements not available on digital.weather.gov and graphical.weather.gov.

e. Feedback Method – The NWS will accept comments and feedback on additional NDFD data via AWS during the prototype period through April 28, 2023. Links to surveys are online at:

<https://www.surveymonkey.com/r/NDFDDataviaAWS>

General information on accessing and using NDFD elements is online at <https://vlab.noaa.gov/web/mdl/ndfd-information-links>

For general questions regarding NDFD data, please email: nws.ndfd@noaa.gov

Part II – Technical Description

a. Format and Science – This service takes advantage of cloud technology employing modern techniques to optimize NDFD web services.

b. Product Availability – NDFD data on AWS is expected to update twice per hour within five minutes of being posted to TGFTP. This is 30-60 minutes sooner than when the same data becomes available on NIDS, which updates once per hour. No accounts or payment is required to access the data on AWS.

c. Additional Information – Detailed information about the NDFD is also available at <https://vlab.noaa.gov/web/mdl/ndfd-information-links>.